

## ***Caledoniophasma marshallae*, a new genus and species of Phasmatodea**

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### **Abstract**

A new genus and species of Insecta: Phasmatodea from New Caledonia is described. The taxonomic position of *Caledoniophasma marshallae* n.gen., n.sp. is uncertain, it appears to be closest related to the Eurycanthinae or Xeroderinae, but differs strikingly in the morphology of the genitalia. The type is housed in the Natural History Museum, London (BMNH).

### **Key words**

Phasmida, Phasmatodea, *Caledoniophasma marshallae* n.gen. n.sp., New Caledonia.

### **Introduction**

The Phasmatodea-fauna of New Caledonia is comparably well researched, but even as recently as 1988 a new species and genus of walking stick from this island, *Microcanachus matileorum*, has been described by Donskoff. A close relationship to New Guinea is obvious, as many of the species belong to the Eurycanthinae, which have their main distribution in New Guinea. So it was not too surprising when the author discovered a striking new species also representing a new genus in the collection of the Natural History Museum, London (BMNH). On the first view it looked similar to several members of Heteropterygidae, but it is actually a member of Anareolatae since the tibiae do not exhibit an area apicalis. The actual systematic position is unclear since the genitalia differ considerably from those of the Eurycanthinae (as revised by Zompro (2001)) and Xeroderinae; both appear to be suitable subfamilies for this species.

### ***Caledoniophasma* n.gen.**

**Diagnosis:** Medium sized anareolate phasmids of unclear systematic position, possibly related to Eurycanthinae or Xeroderinae, but differing in the morphology of the female's genitalia with the subgenital plate being strikingly flattened and bulbous. The male is unknown.

**Female:** Head rounded rectangular, flattened dorsoventrally, eyes projecting less than hemispherically. Scapus flat, rectangular; pedicellus one quarter of the scapus length, half as wide, cylindrical. Pronotum trapezoidal, granulated and spinose. Mesonotum more than twice as long as pronotum, median line indistinct. Metanotum shorter than pronotum. Tegmina present, with pointed shoulders. Wings (if present) are hidden by the tegmina. Meso- and metafemora and tibiae trapezoidal in cross-section, serrated ventrally; basitarsi short, slightly longer than second tarsite, this longer than third, first to third tarsite carinate, fourth shorter than third, not carinate, terminal segment as long as second to fourth combined, curved. Median segment as long as pronotum, quadrate. Abdominal segments II to VII of equal length, from II to IV increasingly broadened, V to VII narrower. Margins of II to VIII expanded, flat, each almost measuring half diameter of segments. VIII longer than VII, with broad, rounded lateral margin, IX and X narrower, not margined like previous segments. Cerci short, flat, triangular, not projecting beyond X. Subgenital plate prominent, curved, with strong, median keel, not projecting beyond X.

**Etymology:** Named after the country of origin, New Caledonia.

The type species is *Caledoniophasma marshallae* n.sp.

*Caledoniophasma marshallae* n.sp.

**Material:** Holotype: ♀. Data labels read as follows: Loc. Hovailou R, Date 3.12.11, Sex, Coll. P.D. Montague, New Caledonia Exped.; New Caledonia. P.D. Montague. 1918-87 [BMNH].

**Description of female:** A striking Phasmid of medium size. General colour different shades of brown. The forelegs, antennae, right midleg and left hindleg are missing.

Head rounded rectangular, flattened dorsoventrally, with a transverse elevation between eyes, both halves of this elevation slightly curved and triangularly raised. Vertex and genae with several small tubercles. Eyes projecting less than hemispherically. Scapus very flat, trapezoidal, anteriorly narrowed, with two flat carinae submedially, and a broad, elevated median line ventrally. Pedicellus one quarter of the scapus length, half as wide, cylindrical.

Pronotum granulose, almost quadrate, slightly dilating posteriorly, with distinct mediotransverse impression. Anterior margin produced, with two prominent spines submedially and a smaller one beside each of them. Behind the latter is a small, deep impression; posterior half of the pronotum with two prominent, submedian spines. Posterior margin flat.

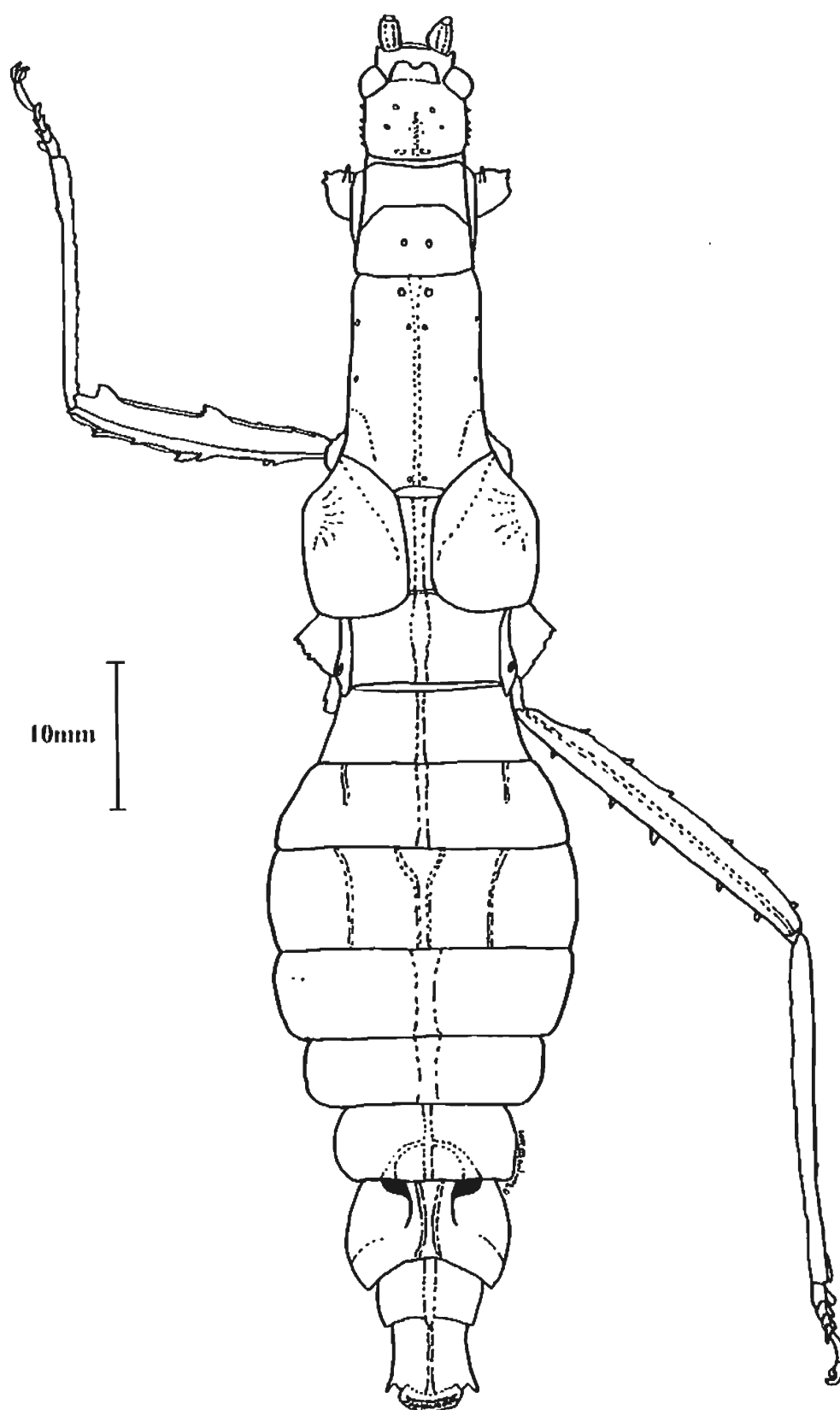
Prosternum with two spines standing close to each other medianly in the anterior half, in the posterior one with two spines.

Mesonotum two times as long as pronotum, almost parallel sided, with distinct median line, granulose, and two prominent spines behind anterior margin submedianly. Two small median tubercles standing slightly before the broad and flat posterior margin. Scale-like tegmina present, from dorsal view almost round, with pointed shoulders, turned downwards exteriorly, tegmina slightly projecting beyond metanotum. Mesosternum granulose, with two rows of three distinct spines submedially.

Metanotum slightly shorter than pronotum, less granulose than mesonotum, largely covered by tegmina. Metaepisternum with prominent spine in the middle, followed by smaller ones posteriorly. Metasternum with some small spines and a deep impression before each coxa.

Mesofemora trapezoidal in cross-section, dorsal and ventral edges with saw-like teeth; dorsally with two small teeth in middle of basal half, a prominent pair in middle and a small pair in middle of apical half; ventrally with several small teeth in basal half, a prominent pair slightly distal of the middle, and another prominent pair slightly before the apex. Mesotibiae triangular in cross-section, serrated ventrally. Tarsites one to three distinctly triangularly carinated dorsally. Mesobasitarsus short, slightly longer than second tarsite, third shorter than second, fourth shorter than third, not carinated. Fifth as long as second to fourth combined, slightly curved, unguis curved, as long as mesobasitarsus, arolium prominent. Metafemora also trapezoidal in cross-section, irregularly serrated. Meta-tibiae and tarsites as in midleg.

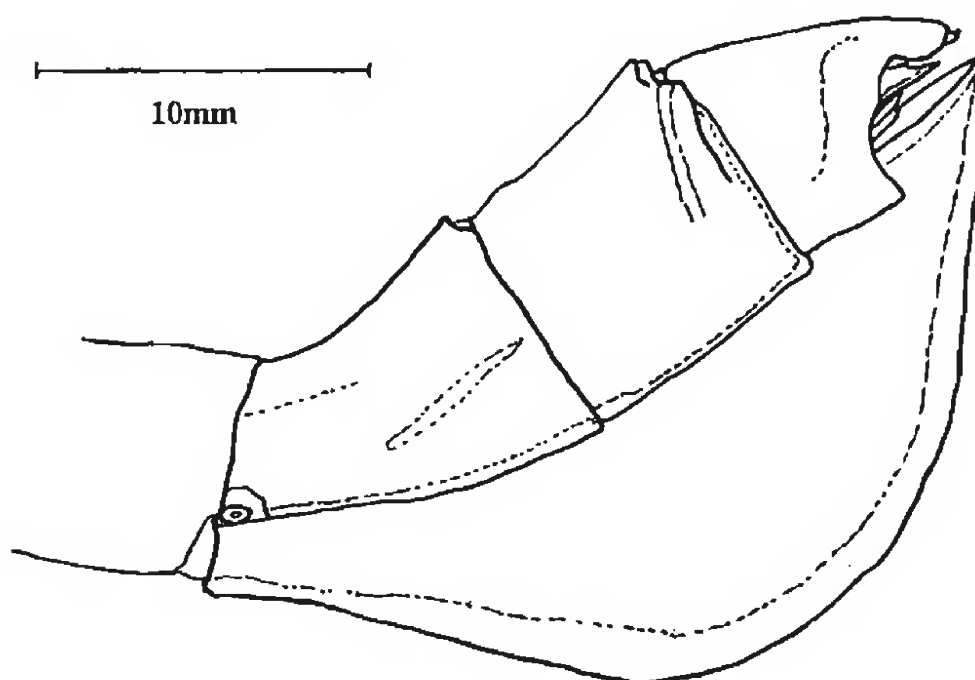
Abdomen: Median segment almost quadrate, slightly granulated; the anterior half with prominent, double median line, this indistinct in posterior half. Segments I to VI of similar length, dorsally more or less flat, with obtuse median line. II to IV strongly dilating, V to VI narrowed. Margins of II to VIII projecting, broad, flat, almost measuring half the diameter of abdominal segments. Median segment with two spines posteriorly, II to IV with two pairs of spines, V with one pair anteriorly, VI unarmed. Tergite VIII as long as median segment, with rounded margins, a double median line and an impression exterior of median lines anteriorly. IX slightly shorter and half as wide as VIII, with two elevated tubercles posteromedianly, X as long as VIII and as wide as IX, lateral margins produced as an acute



**Figure 1.** *Caledoniophasma marshallae* n.gen. n.sp., holotype, dorsal view.

triangle, posterior margin laterally with two curved elevations, these covering the short, flat, triangular cerci. Subgenital plate (fig. 2) with a very prominent sharp keel along its whole length, plate strongly curved, but not projecting beyond X.

<i>Caledoniophasma marshallae</i> n.sp. measurements in mm.			
Body length	94.4	Tegmina	8.9
Head	8.1	Wing	?
Pronotum	7.1	Mesofemora	19.2
Mesonotum	16.0	Mesotibiae	16.9
Metanotum	5.5	Metafemora	23.8
Median segment	8.0	Metatibiae	24.9



**Figure 2.** *Caledoniophasma marshallae* n.sp., terminal abdominal segments, lateral view.

### Etymology

Dedicated to Mrs. Judith Marshall, British Museum (Natural History), London, England, without whose support the author's visit to the British Museum would have been much less successful.

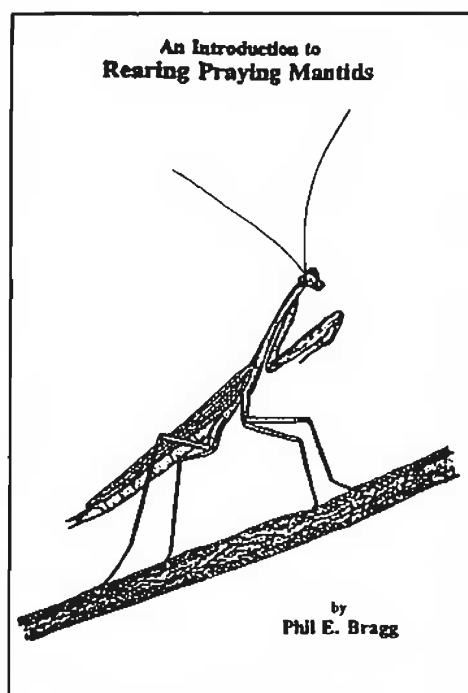
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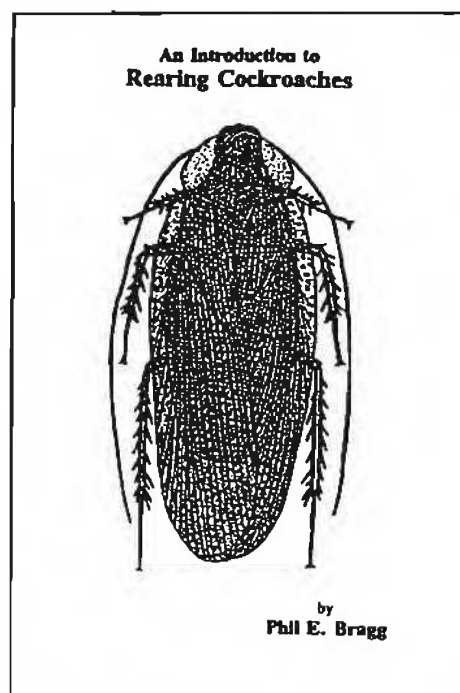
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